Simple Multi-attribute Rating Technique (SMART)

Stage 1: Identify the decision maker (or decision makers). In our problem we will assume that this is just the business owner, but in Chapter 13 we will look at the application of SMART to problems involving groups of decision makers.

Stage 2: Identify the alternative courses of action. In our problem these are, of course, represented by the different offices the owner can choose.

Stage 3: Identify the attributes which are relevant to the decision problem. The attributes which distinguish the different offices will be factors such as rent, size and quality of working conditions. In the next section we will show how a value tree can be of use when identifying relevant attributes.

Stage 4: For each attribute, assign values to measure the performance of the alternatives on that attribute. For example, how well do the offices compare when considering the quality of the working conditions they offer?

Stage 5: Determine a weight for each attribute. This may reflect how important the attribute is to the decision maker (though we will discuss the problem of using importance weights later).

Stage 6: For each alternative, take a weighted average of the values assigned to that alternative. This will give us a measure of how well an office performs over all the attributes.

Stage 7: Make a provisional decision.

Stage 8: Perform sensitivity analysis to see how robust the decision is to changes in the figures supplied by the decision maker.

Decision Analysis for Management Judgment Third Edition
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